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ABSTRACT

In Wake County (North Carolina), kindergarten teachers assess all their entering students with the locally developed Kindergarten Initial Assessment, which includes: (1) an assessment of personal, social, language and literacy, physical, and mathematics skills; (2) an evaluation of print concepts; (3) a visual motor skill index; (4) the Draw-a-Person test; and (5) a screening system designed to help complete the assessment (not all schools). Assessment results indicate that most students entering the county's kindergartens have the skills teachers expect to see. Most children enter with strong readiness skills, but only 6% demonstrate all 41 target skills. Assessment results were similar for both years. Results suggest that Kindergarten Initial Assessment results should continue to be used primarily as a diagnostic tool for teachers and not as a way to assess relative needs across schools. The student record sheet for the assessment is attached.  
(Contains nine tables.) (SLD)

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# MEASURING UP

WAKE COUNTY PUBLIC SCHOOLS

EVALUATION AND RESEARCH DEPARTMENT

ED 431 809

## KINDERGARTEN INITIAL ASSESSMENT RESULTS

Fall 1997 and 1998

Nancy Baenen and Alissa Bernholc

Kindergarten teachers assess all of their entering students with the locally developed Kindergarten Initial Assessment. This assessment is designed to be diagnostic in nature and help teachers plan instruction. A copy of the instrument is included as Attachment 1. Kindergartners are assessed in several ways.

- Natural learning centers in the kindergarten classroom and playground provide information in the areas of personal, social, language and literacy, physical, and math-skill development. Teachers indicate whether skills are observed (yes or no).
- Students' knowledge of 19 concepts of print and their ability to retell a story that is read to them are determined.
- Two standardized instruments with age-based norms, the Visual Motor Index (VMI) and Draw-a-Person (DAP), are administered to address specific motor and visual skills.
- Finally, some schools continue to use the Early Prevention of School Failure (EPSF) screening system to help complete the Kindergarten Initial Assessment forms and to provide them with additional information.

### SYSTEMWIDE STUDENT TRENDS

#### Basic Skill Items

The WCPSS Kindergarten Assessment Committee designed the instrument to measure skills that they expected most students to demonstrate as they entered kindergarten. *Results show that most WCPSS entering kindergartners have these skills.* Based on the 41 basic skill items assessed in both fall 1997 and fall 1998, students demonstrated an average of 35.5 (87%) skills in fall 1997 and 34.7 (85%) in fall 1998. The slight decrease in this average may reflect differences in the skills of students entering kindergarten and/or changes in the teachers giving the assessment. Some refinements made in the assessment probably also contributed:

- 1) Common prompts and acceptable responses were added to provide clearer standards for crediting the demonstration of skills, and

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*Nancy Baenen*

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- 2) A blank response for an item was interpreted to mean that a student did not demonstrate a skill. In fall 1997, blanks were simply skipped in calculating the percentage of skills shown. Directions to teachers therefore encouraged them to conduct full assessments of as many students as possible, while making it acceptable to not assess some English as a Second Language (ESL) and special education students on skills that were beyond their skill level at that time. This rule change was also designed to help standardize practices across schools. *The percentage of missing responses was 2.5% or less for all but three items* (Items 6, 40 and 41) which had 3.3%, 3.9%, and 4.1% missing, respectively.

The skills demonstrated by the highest and lowest percentage of students over the last two years are shown in the next two charts. At least half of the entering kindergartners demonstrated each skill with the exception of "writes some recognizable words" (one of the more advanced skills). Results were similar across years. A full listing of fall 1998 results for all items assessed is included in Attachment 2.

#### **KINDERGARTEN ASSESSMENT RESULTS FALL 1997 and 1998\***

##### **Skills Demonstrated by the Highest Percentage of Entering WCPSS Kindergartners**

<b>Skills</b>	<b>Fall 98</b>	<b>Fall 97</b>
Manipulates small objects with both hands	96.9%	94.8%
Understands spoken language	94.5%	94.9%
Takes responsibility for personal needs	94.5%	90.0%
Holds book upright	94.4%	94.7%
Responds to adult direction in math	94.3%	93.3%

##### **Skills Demonstrated by the Lowest Percentage of Entering WCPSS Kindergartners**

<b>Skills</b>	<b>Fall 98</b>	<b>Fall 97</b>
Writes some recognizable words	22.8%	25.6%
Identifies basic plane shapes	55.6%	63.4%
Knows where to begin reading	55.7%	64.7%
Uses left-to-right movement/library	63.3%	69.9%
Draws person with six body parts	64.8%	66.8%

\*Ordered based on Fall 98 Results

While most children enter our schools with strong readiness skills, only 6% of them demonstrated all 41 skills. On an individual student basis, students lacked an average of 6.3 of the 41 skills. Some students enter school with more needs; about 20% lacked 10 or more skills. Demographically, about 5% of the entering kindergarten students were designated as ESL, with less than 1% identified as special education.

### Trends by Area

*Students demonstrated the highest skill levels in the social and personal development areas with slightly lower skill levels demonstrated for math skills, language and literacy, and physical development. (See the next chart and Attachment 2.) However, because skill areas were assessed through a varying number of items and the difficulty of items may vary across areas, these results must be interpreted cautiously.*

**Kindergarten Assessment Results by Skill Area**

Area	# Common Items	System Average Fall 1998		System Average Fall 1997	
		# Yes	% Yes	# Yes	% Yes
Social Development	5	4.61	92%	4.70	94%
Personal Development	5	4.55	91%	4.51	90%
Physical Development	8	6.72	84%	6.80	85%
Language and Literacy	20	16.63	83%	17.03	85%
Math Skills	3	2.19	73%	2.41	80%
<b>TOTAL</b>	<b>41</b>	<b>34.70</b>	<b>85%</b>	<b>35.45</b>	<b>86%</b>

The Draw-A-Person test (DAP), is used to measure a child's developmental level of perceptual motor skills and visual memory. A child draws a person and is scored on the amount of detail and positions of various body parts. Score interpretations are based upon the child's age. The WCPSS median DAP percentile was 80, much higher than the national median of 50.

On the Visual Motor Integration test (VMI), children copy 24 geometric patterns with varying levels of difficulty with pencil and paper. The VMI was designed to measure changes in eye-hand coordination as children age. The score correlates with intelligence and academic achievement. The final scores are not available at this time due to technical difficulties resulting from a change in norms. For more detailed information, contact the Department of Evaluation and Research.

### Advanced Skills

A few ways to capture more advanced pre-reading skills were added on the assessment form in 1998. The two new "yes/no" literacy items assessed the extent of emerging reading skills among entering kindergartners. Results showed that, of entering kindergartners,

- 68.9% could identify the letters in their own name, and
- 15.7% could read some high-frequency words.

Adding these two new advanced items to the 41 assessed both years slightly decreased the percentage of skills incoming fall 1998 students demonstrated:

- Students demonstrated an average of 83% (35.6) of the 43 skills assessed (rather than 85% of 41 skills).
- Students demonstrated an average of 80% (17.5) of the 22 language and literacy skills assessed (rather than 83% of 20 skills).

Students' knowledge of 19 concepts of print and their ability to retell a story once it is read to them were also assessed for entering kindergartners. This information was missing for more students than on most of the other items: 3.7% for print concepts and 9.1 % for oral retelling. (The two highest percentages of missing responses for the other 43 items were 3.9% and 4.1%.) To be consistent with other items, students with missing data were counted as not demonstrating the target skill level.

The range of missing information varied widely from school to school, from 0% to 78% for print concepts and 0% to 98% for oral retelling. We cannot tell whether some schools simply ran out of time to assess all students before the forms were due, or whether they systematically selected students to be assessed based on results on other items (which could skew results). *Thus, results obtained give us some sense of system trends (especially for print concepts), but are difficult to interpret for schools with high percentages of missing information.*

The median print concept score for WCPSS fell in the category of 8-11 of the 19 concepts. Curriculum staff indicate students who come into WCPSS understanding 12 or more concepts show advanced skills. *Overall, at least 39.8% of those entering kindergarten understood at least 12 or more print concepts.* (Instruction in concepts of print is part of the kindergarten curriculum; those who do not understand at least 17 of the 19 concepts by the *end* of kindergarten are considered to need instructional assistance the next year.)

#### WCPSS Concepts of Print Results: Incoming Kindergartners Fall 98

Missing	0-3	4-7	8-11	12-17	17-19
#	271	909	1,460	1,826	2,432
%	3.7	12.3	19.7	24.6	32.8

*For oral re-telling, at least 38.7% of the entering kindergartners assessed earned a score of 3 or 4, the highest scores on this 1-4 scale.* The fact that scores were not provided for 9% of the students makes our figures conservative and reduces our confidence that the results truly reflect the system.

#### WCPSS Oral Retelling of Story Results: Incoming Kindergartners Fall 98

Missing	1	2	3	4
#	674	660	3,215	2,139
%	9.1	8.9	43.3	28.8

## SCHOOL TRENDS

Results across schools show the following patterns:

- The average number of skills demonstrated per child varied from 30.3 to 38.3 (of the 41 common items).
- The percentage of incoming kindergarten students who received free or reduced-priced lunches ranged from 2.0% to 39.7%.
- The percentage of children who understood 12 or more of the 19 print concepts ranged from 8% to 81% (excluding schools with high percentages of missing information).
- The median DAP percentile ranged from 46 to 97.

The summary of results by school included in Attachment 3 provides information on needs based on several measures (schools are listed alphabetically). In addition to assessment results, two other indicators of need are provided: the percentage of students in kindergarten on the 20<sup>th</sup> day listed as eligible for free or reduced price lunches (FRL) and the percentage of kindergartners listed as ESL. (Special education percentages were not included since they do not vary widely across schools in WCPSS, with the highest percentage being 4.4%.) Research indicates the percentage of students who are low income in a school correlates with student achievement. Attachment 4 ranks schools in order of FRL percentages, with other rankings provided for comparison.<sup>1</sup>

While all of these measures give schools useful information on the needs of their incoming students, *Kindergarten Initial Assessment results should continue to be used primarily as a diagnostic tool for teachers and not as a way to assess relative needs across schools*. The two main reasons are that:

- School rankings vary (often greatly) across measures.
- Many schools showed different levels of need for incoming students on the locally developed Initial Kindergarten Assessment than was true on the nationally normed Early Prevention of School Failure Assessment. School ranks based on EPSF in 1996-97 and the Kindergarten Assessment in fall 1997 and 1998 varied by a median difference of 9 rank order points for fall 1997 and 7 for fall 1998.<sup>2</sup> While some of this variation was likely due to changes in student assignment, some may have been due to differences in the items assessed and the more subjective standards for teacher ratings of students on the new kindergarten assessment.

<sup>1</sup> FRL percentages shown here are probably lower than those for later in the year as more students are processed for FRL.

<sup>2</sup> Based on the 51 schools with EPSF results for 1996-97. For the Kindergarten Assessment, we used the average number of observational items students did not demonstrate for the 41 common items.

**Wake County Public School System  
Kindergarten Initial Assessment Sheet  
Student Record Sheet**

**Attachment 1**

Last Name	1st Initial	Student ID	Date of Birth MO DY YR	School Code	Assessment Date MO DY YR

  

Mark if appropriate:	DAP Raw Score	VMI Raw Score	DAP Percentile _____
ESL <input type="checkbox"/>			VMI Percentile _____
Special Education <input type="checkbox"/>			

**Art Center**

**Observed**  
**Yes No**

**Observer's Comments**

*Personal Development: Demonstrates confidence as a learner*

Identifies self with first and last name

Talks/draws picture of self (see DAP)

*Social Development: Demonstrates trust in adults*

Responds to adult direction

*Physical Development: Fine Motor*

Controls crayons and pencils

Draws a person with six body parts (head, body, 2 arms, 2 legs)

Draws three basic shapes using a model (see VMI)

Holds scissors appropriately

*Language and Literacy*

*Listening:* Identifies the meaning of basic concepts (color)

*Writing*

Pre-Emergent Attempts to write name (see DAP)

Emergent Extension - Writes some recognizable words

**Playground or Large Indoor Space**

*Personal Development: Demonstrates confidence in self as a learner*

Interacts easily with adults and peers

*Social Development: Demonstrates trust in adults*

Responds to adult direction

*Physical Development: Gross Motor*

Walks forward, backward, and sideways on a line

Catches a small ball

Throws ball with smooth fluid motion

*Language and Literacy: Listening*

Understands spoken language

Follows 1, 2, 3 step direction

Understands meaning of basic concepts

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	Observed	Yes	No	Observer's Comments		
<b>Dramatic Play Center</b>						
<i>Personal Development</i>						
<i>Demonstrates confidence in self as a learner</i>						
Interacts easily with adults and peers	<input type="checkbox"/>	<input type="checkbox"/>				
<i>Demonstrates increased independence</i>						
Takes responsibility for personal needs	<input type="checkbox"/>	<input type="checkbox"/>				
<i>Social Development</i>						
<i>Respects rights of other children</i>						
Plays/works with other children (category of play)	<input type="checkbox"/>	<input type="checkbox"/>				
<i>Demonstrates ability to make friends</i>						
Speaks kindly to classmates	<input type="checkbox"/>	<input type="checkbox"/>				
<i>Language and Literacy</i>						
<i>Listening:</i> Understands the meaning of basic concepts						
<i>Speaking</i>						
Uses words to express needs and wants	<input type="checkbox"/>	<input type="checkbox"/>				
Speaks in complete sentences	<input type="checkbox"/>	<input type="checkbox"/>				
Names common objects	<input type="checkbox"/>	<input type="checkbox"/>				
Engages freely in conversation in varied settings	<input type="checkbox"/>	<input type="checkbox"/>				
Uses language in imaginative play	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Math Center</b>						
<i>Social Development: Demonstrates trust in adults</i>						
Responds to adult direction	<input type="checkbox"/>	<input type="checkbox"/>				
<i>Physical Development</i>						
Manipulates small objects with both hands	<input type="checkbox"/>	<input type="checkbox"/>				
<i>Language and Literacy</i>						
<i>Listening:</i> Attends to speaker						
<i>Speaking:</i> Speaks in complete sentences (words ___, phrases ___)						
<i>Mathematics</i>						
<i>Numeration</i>		1-5	6-10	11-20	20+	
Rote counts to _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates 1-1 correspondence	<input type="checkbox"/>	<input type="checkbox"/>				
<i>Geometry:</i> Identifies basic plane shapes (circle, rectangle, square, triangle)	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Library Center</b>						
<i>Language and Literacy</i>						
<i>Speaking: Demonstrates confident and effective use of language</i>						
Uses words to express feelings and ideas	<input type="checkbox"/>	<input type="checkbox"/>				
Speaks in simple sentences	<input type="checkbox"/>	<input type="checkbox"/>				
<i>Pre-Emergent Reading: Handles book appropriately</i>						
Holds book upright	<input type="checkbox"/>	<input type="checkbox"/>				
Turns pages front to back	<input type="checkbox"/>	<input type="checkbox"/>				
Uses left to right movement	<input type="checkbox"/>	<input type="checkbox"/>				
Knows where to begin reading	<input type="checkbox"/>	<input type="checkbox"/>				
<i>Emergent Reading</i>						
Identifies letters in own name	<input type="checkbox"/>	<input type="checkbox"/>				
Reads some high frequency words (e.g., I, a, the)	<input type="checkbox"/>	<input type="checkbox"/>				
Concepts of print score	0-3 <input type="checkbox"/>	4-7 <input type="checkbox"/>	8-11 <input type="checkbox"/>	12-17 <input type="checkbox"/>	17-19 <input type="checkbox"/>	
Oral re-telling score	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>		

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Attachment 2  
WCPSS Summary  
Results by Item within Skill Areas

10:33 Thursday, April 15, 1999

Kindergarten Assessment Fall 1998  
Personal Development

	ANS				
	YES		NO		
	N	N	PCTN	N	PCTN
Personal Development					
Q1. Identifies self with name/art	7424	6785	91.4	639	8.6
Q2. Talks/draws picture of self/art	7424	6738	90.8	686	9.2
Q11. Interacts with adults & peers/playground	7424	6701	90.3	723	9.7
Q19. Interacts with adults & peers/drama	7424	6546	88.2	878	11.8
Q20. Takes responsibility for personal needs/drama	7424	7017	94.5	407	5.5

Kindergarten Assessment Fall 1998  
Social Development

	ANS				
	YES		NO		
	N	N	PCTN	N	PCTN
Social Development					
Q3. Responds to adult direction/art	7423	6865	92.5	558	7.5
Q12. Responds to adult direction/playground	7423	6812	91.8	611	8.2
Q21. Plays/works with other children/drama	7424	6807	91.7	617	8.3
Q22. Speaks kindly to classmates/drama	7424	6711	90.4	713	9.6
Q29. Responds to adult direction/math	7424	7000	94.3	424	5.7

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Kindergarten Assessment Fall 1998  
Physical Development

10:33 Thursday, April 15, 1999

		ANS				
		YES		NO		
		N	N	PCTN	N	PCTN
Physical Development						
Q4. Controls crayons and pencils/art	7423	6649	89.6	774	10.4	
Q5. Draws person with 6 body parts/art	7424	4809	64.8	2615	35.2	
Q6. Draws 3 basic shapes using a model/art	7423	5245	70.7	2178	29.3	
Q7. Holds scissors appropriately/art	7423	6180	83.3	1243	16.7	
Q13. Walks different direction on line/playground	7423	6617	89.1	806	10.9	
Q14. Catches a small ball/playground	7424	6667	89.8	757	10.2	
Q15. Throws ball with smooth motion/playground	7424	6524	87.9	900	12.1	
Q30. Manipulates small objects with both hands/math	7424	7191	96.9	233	3.1	

Kindergarten Assessment Fall 1998  
Math Skills

		ANS				
		YES		NO		
		N	N	PCTN	N	PCTN
math Skills						
Q33. Rote count to: /math	7424	5835	78.6	1589	21.4	
Q34. Demonstrates 1-1 correspondence/math	7423	6332	85.3	1091	14.7	
Q35. Ids basic plane shapes/math	7424	4125	55.6	3299	44.4	

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		ANS			
		YES		NO	
		N	N	PCTN	N
Language and Literacy					
Q8. Ids meaning of basic concept/arts	7424	6510	87.7	914	12.3
Q9. Attempts to write name/art	7424	6476	87.2	948	12.8
Q10. Emergent: Writes some recognizable words/art	7422	1690	22.0	5732	77.2
Q16. Understands spoken language/playground	7424	7012	94.5	412	5.5
Q17. Follows 1,2,3 step directions/playground	7424	5520	74.4	1904	25.6
Q18. Understands meaning of basic concepts/playground	7424	6655	89.6	769	10.4
Q23. Understands meaning of basic concepts/drama	7423	6858	92.4	565	7.6
Q24. Uses words to express needs/drama	7424	6875	92.6	549	7.4
Q25. Speaks in complete sentences/drama	7423	6627	89.3	796	10.7
Q26. Names common objects/drama	7424	6891	92.8	533	7.2
Q27. Engages freely in conversations/drama	7423	6234	84.0	1189	16.0
Q28. Uses language in imaginative play/drama	7424	6397	86.2	1027	13.8
Q31. Attends to speaker/math	7424	6833	92.0	591	8.0
Q32. Speaks in complete sentences/math	7422	6632	89.4	790	10.6
Q36. Uses words to express feelings & ideas/library	7424	6834	92.1	590	7.9
Q37. Speaks in simple sentences/library	7424	6853	92.3	571	7.7
Q38. Holds book upright/library	7424	7011	94.4	413	5.6
Q39. Turns pages front to back/library	7424	6747	90.9	677	9.1
Q40. Uses left-to-right movement/library	7423	4698	63.3	2725	36.7
Q41. Knows where to begin reading/library	7422	4132	55.7	3290	44.3

(CONTINUED)

Kindergarten Assessment Fall 1998  
Language and Literacy

10:33 Thursday, April 15, 1999

	N	ANS			
		YES		NO	
		N	PCTN	N	PCTN
Language and Literacy					
Q42. Emergent: Ids letters in own name/library	7424	5112	68.9	2312	31.1
Q43. Emergent: Reads some high-frequency words/library	7422	1164	15.7	6258	84.3

Kindergarten Assessment Fall 1998  
Language and Literacy

Concepts of Print score

Q44	Frequency	Percent	Cumulative	Cumulative
			Frequency	Percent
0-3	909	12.7	909	12.7
4-7	1462	20.4	2371	33.1
8-11	1827	25.5	4198	58.7
12-17	2433	34.0	6631	92.7
17-19	522	7.3	7153	100.0

Frequency Missing = 271

Oral retelling score

Q45	Frequency	Percent	Cumulative	Cumulative
			Frequency	Percent
1	663	9.8	663	9.8
2	3216	47.6	3879	57.5
3	2140	31.7	6019	89.2
4	731	10.8	6750	100.0

Frequency Missing = 674

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**Attachment 3**  
**Alphabetic Order**

Chart shows average number of Nos in each area, median DAP percentile, and rankings  
Kinderergarten Assessment Results by School

SCHOOL	N	F/R Lunch (#)	ESL No's	Total (#)	ESL Total (#)	No's	Personal	Social	Physical	Math	Lang/Lit (#)	DAP tile (# 12+)	**Print Concepts (# 12+)	Median DAP tile	Rank by F/R Lunch	Rank by DAP tile	Rank by Total No's	Rank by Median DAP tile	Rank by Total No's	Rank by Median DAP tile	Rank by Print Concepts
Adams Elementary	197	11.84	10.15	7.39	0.52	0.55	1.41	0.80	4.12	50.25	79.0	38	53	38.5	21						
Alex Elementary	169	1.18	2.17	4.51	0.20	0.23	1.09	0.47	2.52	54.50	77.0	4	9	42.0	5						
Aversboro Elementary	66	15.86	1.62	6.41	0.29	0.23	1.45	1.00	3.44	40.91	46.0	51	37	68.0	36						
Baileywick Elementary	87	16.15	16.09	5.91	0.22	0.38	0.89	0.76	3.69	57.47	79.0	52	29	38.5	9						
Baucom Elementary	174	4.81	0.00	6.01	0.45	0.48	1.59	0.51	2.98	49.43	56.5	10	31	66.0	22						
Braabfield Elementary	110	9.24	12.13	7.25	0.73	0.44	1.19	0.65	4.25	55.45	75.0	20	51	45.5	10						
Brentwood Elementary	67	14.60	10.45	9.36	0.58	0.82	2.24	1.40	4.31	11.94	63.0	46	67	59.0	67						
Briarcliff Elementary	106	9.75	12.26	8.59	0.58	0.49	1.63	1.02	4.87	25.47	93.5	27	61	7.5	55						
Brooks Elementary	59	14.74	5.08	5.25	0.29	0.41	1.00	0.58	2.98	40.68	84.5	47	14	25.0	37						
Bugg Elementary	56	10.14	0.00	5.96	0.34	0.43	1.79	0.66	2.75	30.36	92.0	28	30	11.0	48						
Carver Elementary	83	19.91	4.82	9.06	0.89	0.53	1.89	1.17	4.58	44.58	79.5	59	65	35.5	29						
Cary Elementary	139	14.77	11.51	7.27	0.67	0.38	1.26	1.09	3.88	28.06	75.0	48	52	45.5	52						
Comba Elementary	82	7.61	26.83	8.82	0.60	0.56	1.55	0.99	5.12	46.34	57.0	17	63	63.5	26						
Conn Elementary	71	25.55	0.00	6.06	0.38	0.31	1.08	0.77	3.51	12.68	66.0	66	32	55.5	66						
Creech Road Elementary	102	22.40	1.96	6.59	0.73	0.66	2.23	0.84	4.14	35.29	74.5	63	60	47.0	42						
Davis Drive Elementary	166	2.38	10.24	3.99	0.34	0.30	0.75	0.39	2.22	50.60	84.0	2	5	26.0	20						
Douglas Elementary *	54	15.33	16.52	9.22	0.33	0.35	2.00	0.89	5.65	42.59	66.0	49	66	55.5	32						
Durant Road Elementary	153	5.05	1.31	3.68	0.12	0.17	0.90	0.42	2.06	41.83	83.0	11	3	28.5	33						
Farmington Woods Elem.	99	11.36	24.24	8.85	0.53	0.54	1.33	1.25	5.20	44.44	57.0	36	64	63.5	30						
Fox Road Elementary	138	12.94	2.17	8.69	0.63	0.64	1.69	0.86	4.88	18.12	71.0	41	62	49.0	60						
Fuller Elementary	45	10.53	2.22	5.53	0.33	0.24	1.29	0.76	2.91	46.67	68.0	30	19	52.0	25						
Fugnay-Warina Elementary	141	10.75	3.55	5.58	0.35	0.26	1.10	0.80	3.08	19.86	70.0	33	21	51.0	59						
Green Elementary	118	6.16	0.00	4.02	0.14	0.27	0.92	0.42	2.25	52.54	89.0	15	7	16.5	14						
Hilburn Drive Elementary	180	11.16	0.00	4.97	0.22	0.24	1.04	0.54	2.92	41.11	91.0	35	12	14.0	35						
Hodge Road Elementary	119	25.50	10.92	6.24	0.46	0.21	1.24	1.07	3.25	47.90	82.0	65	35	31.5	23						
Holly Springs Elem. *	155	18.44	0.65	6.18	0.47	0.39	1.41	0.76	3.15	30.97	77.0	54	34	42.0	47						
Hunter Elementary	108	19.65	0.00	5.34	0.24	0.35	0.74	0.82	3.19	33.33	96.0	58	15	3.5	45						
Jeffreys Grove Elem.	50	14.29	10.20	7.77	0.63	0.52	1.23	0.99	4.39	39.80	94.0	45	55	5.5	39						
Jones Dairy Elem.	146	4.60	0.00	5.64	0.45	0.23	1.05	1.19	2.73	1.37	85.5	8	23	22.5	69						
Joyner Elementary	95	8.21	2.11	6.43	0.34	0.56	1.78	0.52	3.24	21.05	91.0	19	39	14.0	57						
Kingswood Elementary	73	5.56	5.48	6.55	0.33	0.51	1.63	0.85	3.23	80.82	80.0	13	41	33.5	1						
Knightdale Elementary	97	13.72	0.00	6.56	0.20	0.15	2.11	0.89	3.21	8.25	71.0	43	42	49.0	68						
Lacy Elementary	89	18.54	3.37	7.40	0.70	0.55	1.46	0.69	4.01	28.09	92.0	55	54	11.0	51						
Lead Mine Road Elem.	111	7.18	10.81	6.86	1.07	0.44	1.35	0.86	3.13	36.94	71.0	16	46	49.0	41						
Lincoln Heights Elem.	95	10.73	0.00	8.26	0.63	0.83	1.55	0.71	4.55	26.32	77.0	32	59	42.0	54						
Lockhart Elementary	97	27.96	9.28	6.06	0.67	0.41	0.82	0.81	3.34	16.49	83.0	68	33	28.5	63						
Lynn Road Elementary	93	8.49	1.08	5.75	0.27	0.17	1.62	0.65	3.04	17.20	87.5	21	26	20.0	61						
Millbrook Elementary	83	1.549	7.23	5.70	0.20	0.37	1.34	0.93	2.86	28.32	5.5	50	25	22.5	19						
Morrisville Elementary	154	2.49	5.19	3.85	0.12	0.15	0.99	0.36	2.23	51.95	91.0	3	4	14.0	17						

Number of items: 41 Total; 5 Personal; 5 Social; 20 Lang/Lit; 8 Physical; 3 Math  
High rank indicates more needs

\* These schools have more than 3% kindergarten students served by special education  
\*\*Caution: Results for the following schools, which had over 10% data missing for Print Concepts, may not reflect the school overall  
(% missing: Jones Dairy 78%, Wendell 31%, Aversboro 14%, and Combs 12%).

Note: Missing values are considered no's for observational items. For Print Concepts, students with no data were counted as demonstrating <12 concepts.  
/3

Chart shows average number of Nos in each area, median DAP percentile, and rankings  
Kindergarten Assessment Results by School

SCHOOL	N	F/R Lunch (#)	ESL Total (#)	Total No's	Personal	Social	Physical	Math	Lang/Lit	Rank by Concepts (* 12+)	Median DAP	Rank by F/R tile	Rank by Total No's	Rank by Median DAP tile	Rank by Print Concepts
North Ridge Elementary	92	12.33	4.35	5.64	0.30	0.15	1.03	1.26	2.89	33.70	66.0	40	24	55.5	44
Northwoods Elementary	143	3.67	9.79	4.59	0.25	0.20	0.94	0.79	2.41	51.75	93.5	5	10	7.5	18
Oak Grove Elementary	156	2.02	0.00	3.31	0.29	0.22	0.78	0.44	1.58	75.64	83.0	1	2	28.5	3
Olive Chapel Elementary	181	5.77	6.08	5.80	0.41	0.37	0.81	0.69	3.51	41.44	85.0	14	27	24.0	34
Olds Elementary	34	10.59	0.00	4.00	0.15	0.18	0.94	0.41	2.32	58.62	96.0	31	6	3.5	7
Partnership Primary	57	4.00	0.00	5.58	0.63	0.42	0.96	0.61	2.95	61.40	86.0	7	20	21.0	6
Penny Road Elementary	148	12.24	1.35	7.86	0.67	0.69	1.39	0.78	4.32	44.59	88.0	39	57	19.0	28
Pleasant Union Elementary	89	3.68	0.00	2.67	0.19	0.35	0.74	0.10	1.09	79.78	97.0	6	1	1.5	2
Po Elementary	83	4.68	0.00	5.49	0.55	0.54	1.16	1.01	2.23	20.48	59.0	9	18	60.5	58
Powell Elementary	61	8.93	3.28	7.82	0.70	0.57	1.84	0.69	4.02	54.10	89.0	24	56	16.5	12
Rand Road Elementary	101	20.88	2.97	10.68	0.89	1.06	2.72	1.07	1.94	16.83	46.0	62	69	68.0	62
Rolesville Elementary	131	20.38	6.11	7.04	0.40	0.22	1.50	0.96	3.95	22.90	66.0	61	47	55.5	56
Root Elementary	63	8.59	4.59	3.35	0.25	0.22	0.68	0.67	2.52	65.08	94.0	23	8	5.5	4
Smith Elementary	108	20.18	7.41	9.85	0.77	0.72	1.84	1.06	5.46	14.81	46.0	60	68	68.0	64
Stough Elementary *	97	9.28	13.40	8.01	0.55	0.53	1.67	1.01	4.26	45.36	79.5	26	58	35.5	27
Swift Creek Elementary	136	8.53	2.21	6.42	0.63	0.32	1.32	0.58	3.57	52.21	79.0	22	38	38.5	16
Timber Drive Elementary	129	5.15	0.00	4.81	0.32	0.37	0.77	0.57	2.78	43.41	97.0	12	11	1.5	31
Underwood Elementary	40	18.69	0.00	5.08	0.53	0.50	0.88	0.53	2.65	40.00	65.0	56	13	55.5	38
Vance Elementary	80	13.97	11.25	5.88	0.39	0.31	1.00	0.68	3.50	37.50	83.0	44	28	28.5	40
Vandora Springs Elem.	75	24.16	1.33	7.13	0.71	0.44	1.17	1.23	3.59	50.67	59.0	64	49	60.5	19
Wake Forest Elementary	154	11.55	0.00	5.40	0.31	0.19	1.40	0.97	2.53	32.47	66.0	37	16	55.5	46
Washington Elementary	89	18.99	0.00	6.45	0.44	0.25	1.18	1.48	3.10	53.93	92.0	57	40	11.0	13
Weatherstone Elementary	151	10.28	5.30	5.42	0.36	0.32	0.79	1.29	2.66	47.68	88.5	29	17	18.0	24
Wendell Elementary	62	39.74	0.00	6.71	0.84	0.26	1.29	1.05	3.27	14.52	57.0	69	44	63.5	65
West Lake Elementary	148	7.96	0.00	5.64	0.47	0.43	1.24	0.64	2.86	58.11	76.0	18	22	44.0	8
Wilburn Elementary	138	18.07	7.97	6.73	0.43	0.39	1.09	0.90	3.91	27.54	93.0	53	45	9.0	53
Wiley Elementary	42	13.33	4.76	6.36	0.50	0.50	1.57	0.69	3.10	52.38	57.0	42	36	63.5	15
Willow Springs Elem.	129	10.98	13.95	7.05	0.44	0.43	1.27	1.14	3.77	54.26	82.0	34	48	31.5	11
York Elementary	124	9.24	11.29	7.17	0.50	0.61	1.40	0.79	3.87	33.87	80.0	25	50	33.5	43
Zebulon Elementary	103	26.24	0.00	6.64	0.42	0.25	1.39	1.08	3.50	28.16	79.0	67	43	38.5	50
WCPSS	7423	12.12	5.16	6.29	0.45	0.39	1.28	0.81	3.37	39.80	80.0	na	na	na	na

Number of items: 41 total; 5 personal; 5 social; 20 Lang/Lit; 8 Physical; 3 Math

\* High rank indicates more needs

\* These schools have more than 3% kindergarten students served by special education

## Attachment 4

Kindergarten Assessment Results by School  
Chart shows average number of Nos in each area, median DAP percentile, and rankings  
In order of increasing percentage in Free/Reduced Lunch

10:25 Friday, March 12, 1999 3

SCHOOL	N	F/R Lunch (#)	ESL (#)	Total No.'s	Personal	Social	Physical	Math	Lang/Lit	** Print Concepts (\$ 12+)	Median DAP Title	Rank by F/R Lunch	Rank by Total No.'s	Rank by Median DAP Title	Rank by Print Concepts
Oak Grove Elementary	156	2.02	0.00	3.31	0.29	0.22	0.78	0.44	1.58	75.64	83.0	1	2	28.5	3
David Drive Elementary	166	2.38	10.24	3.99	0.34	0.10	0.75	0.39	2.22	50.60	84.0	2	5	26.0	20
Morrisville Elementary	154	2.19	5.19	3.85	0.12	0.15	0.99	0.36	2.23	51.95	91.0	3	4	14.0	17
APEX Elementary	169	3.18	2.37	4.51	0.20	0.23	1.09	0.47	2.52	64.50	77.0	4	9	42.0	5
Northwoods Elementary	143	3.67	9.79	4.59	0.25	0.20	0.94	0.79	2.41	51.75	93.5	5	10	7.5	18
Pleasant Union Elementary	89	3.68	0.00	2.67	0.19	0.15	0.74	0.30	1.09	79.78	97.0	6	1	1.5	2
Partnership Primary	57	4.00	0.10	5.58	0.63	0.42	0.96	0.61	2.95	61.40	86.0	7	20	21.0	6
Jones Dairy Elem.	146	4.60	0.00	5.64	0.45	0.23	1.05	1.19	2.73	1.37	85.5	8	23	22.5	69
Poe Elementary	83	4.68	0.00	5.49	0.55	0.94	1.16	1.01	2.23	20.48	59.0	9	18	60.5	58
Baucom Elementary	174	4.81	0.00	6.01	0.45	0.48	1.59	0.51	2.98	49.43	56.5	10	31	66.0	22
Durant Road Elementary	153	5.05	1.11	3.68	0.12	0.17	0.90	0.42	2.06	41.83	83.0	11	3	28.5	33
Timber Drive Elementary	129	5.15	0.00	4.81	0.32	0.37	0.77	0.57	2.78	43.41	97.0	12	11	1.5	31
Kingwood Elementary	73	5.56	5.48	6.55	0.33	0.51	1.63	0.85	3.23	80.82	80.0	13	41	33.5	1
Olive Chapel Elementary	181	5.77	6.08	5.80	0.41	0.37	0.81	0.69	3.51	41.44	85.0	14	27	24.0	34
Green Elementary	118	6.16	0.00	4.02	0.14	0.27	0.92	0.42	2.25	52.54	89.0	15	7	16.5	14
Lead Mine Road Elel.	111	7.18	10.81	6.86	1.07	0.44	1.35	0.86	3.13	36.94	71.0	16	46	49.0	41
Combs Elementary	82	7.61	26.83	8.82	0.60	0.56	1.55	0.99	5.12	46.34	57.0	17	63	63.5	26
West Lake Elementary	148	7.96	5.64	5.47	0.43	1.24	0.64	0.64	58.11	76.0	18	22	44.0	8	
Joyner Elementary	95	8.21	2.11	6.43	0.34	0.56	1.78	0.52	3.24	21.05	91.0	19	39	14.0	57
Brassfield Elementary	110	8.24	12.73	7.25	0.73	0.44	1.19	0.65	4.25	55.45	75.0	20	51	45.5	10
Lynn Road Elementary	93	8.49	1.08	5.75	0.27	0.17	1.62	0.65	3.04	17.20	87.5	21	26	20.0	61
Swift Creek Elementary	136	8.53	2.21	6.42	0.63	0.32	1.32	0.58	3.57	52.21	79.0	22	38.5	38.5	16
Root Elementary	63	8.59	1.59	4.35	0.25	0.22	0.69	0.67	2.52	65.08	94.0	23	8	5.5	4
Powell Elementary	61	8.93	3.28	7.82	0.70	0.57	1.84	0.69	4.02	54.10	89.0	24	56	16.5	12
York Elementary	124	9.24	11.29	7.17	0.50	0.61	1.40	0.79	3.87	33.87	80.0	25	50	33.5	43
Stough Elementary *	97	9.28	11.40	8.01	0.55	0.53	1.67	1.01	4.26	45.16	79.5	26	58	35.5	27
Briarcliff Elementary	106	9.75	12.26	8.59	0.50	0.49	1.63	1.02	4.87	25.47	93.5	27	61	7.5	55
Bugg Elementary	56	10.14	0.00	5.96	0.34	0.43	1.79	0.66	2.75	30.16	92.0	28	30	11.0	48
Weatherstone Elementary	151	10.28	5.30	5.42	0.36	0.32	0.79	1.29	2.66	47.68	88.5	29	17	18.0	24
Fuller Elementary	45	10.53	2.22	5.53	0.33	0.24	1.29	0.76	2.91	46.67	68.0	30	19	52.0	25
Olds Elementary	34	10.59	0.00	4.00	0.15	0.18	0.94	0.41	2.32	58.82	96.0	31	6	3.5	7
Lincoln Heights Elel.	95	10.73	0.00	8.26	0.63	0.83	1.55	0.71	4.55	26.32	77.0	32	59	42.0	54
Flynnway-Variina Elementary	141	10.75	3.55	5.58	0.35	0.26	1.10	0.80	3.08	19.86	70.0	33	21	51.0	59
Willoow Springs Elel.	129	10.98	13.95	7.05	0.44	0.43	1.27	1.14	3.77	54.26	82.0	34	48	31.5	11
Hillburn Drive Elementary	180	11.16	0.00	4.37	0.22	0.24	1.04	0.54	2.92	41.11	91.0	35	12	14.0	35
Fairington Woods Elel.	99	11.36	24.24	8.85	0.54	1.33	1.25	5.20	44.44	57.0	36	64	61.5	30	
Wake Forest Elementary	154	11.55	0.00	5.40	0.31	1.19	1.40	0.97	2.53	32.47	66.0	37	16	55.5	46
Adams Elementary	197	11.84	10.15	7.39	0.52	0.55	1.41	0.80	4.12	50.25	79.0	38	53	38.5	21

Number of items: 41 Total; 5 Personal; 5 Social; 20 Lang/Lit; 8 Physical; 3 Math

\* High rank indicates more needs

\* These schools have more than 35 kindergarten students served by special education

\*\*Caution: Results for the following schools, which had over 10% data missing for Print Concepts, may not reflect the school overall

( % missing: Jones Dairy 78%, Wendell 31%, Aweshoro 14%, and Combs 12%).

Note: Missing values are considered no's for observational items. For Print Concepts, students with no data were counted as demonstrating &lt;12 concepts.

Chart shows average number of Nos in each area, median DAP percentile, and rankings  
In order of increasing percentage in Free/Reduced Lunch

SCHOOL	N	F/R Lunch (#)	ESL (#)	Total No's	Personal	Social	Physical	Math	Lang/Lit	Print Concepts (* 12+)	Median DAP %tile	Rank by F/R Lunch	Median DAP %tile	Rank by Total No's	Median DAP %tile	Rank by Print Concepts
Penny Road Elementary	148	12.24	1.35	7.86	0.67	0.69	1.39	0.78	4.32	44.59	88.0	39	57	19.0	28	
North Ridge Elementary	92	12.33	4.35	5.64	0.30	0.15	1.03	1.26	2.89	33.70	66.0	40	24	55.5	44	
Fox Road Elementary	138	12.94	2.17	8.69	0.63	0.64	0.50	0.86	4.88	18.12	71.0	41	62	49.0	60	
Wiley Elementary	42	13.33	4.76	6.36	0.50	0.50	1.57	0.69	3.10	52.38	57.0	42	36	63.5	15	
Knightdale Elementary	97	13.72	0.00	6.56	0.20	0.15	2.11	0.89	3.21	8.25	71.0	43	42	49.0	68	
Vance Elementary	80	13.97	11.25	5.88	0.39	0.31	1.00	0.68	3.50	37.50	83.0	44	28	28.5	40	
Jeffreys Grove Elem.	98	14.29	10.20	7.77	0.63	0.52	1.23	0.99	4.39	39.80	94.0	45	55	5.5	39	
Brentwood Elementary	67	14.60	10.45	9.36	0.58	0.82	2.24	1.40	4.31	11.94	63.0	46	67	59.0	67	
Brooks Elementary	59	14.74	5.08	5.25	0.29	0.41	1.00	0.58	2.98	40.68	84.5	47	14	25.0	37	
Cary Elementary	139	14.77	11.51	7.27	0.67	0.38	1.26	1.09	3.88	28.06	75.0	48	52	45.5	52	
Douglas Elementary *	54	15.33	18.52	9.22	0.33	0.35	2.00	0.89	5.65	42.59	66.0	49	66	55.5	32	
Millbrook Elementary	83	15.49	7.23	5.70	0.20	0.37	1.34	0.93	2.86	20.92	85.5	50	25	22.5	49	
Averboro Elementary	66	15.86	1.52	6.41	0.29	0.23	1.45	1.00	3.44	40.91	46.0	51	37	68.0	36	
Baileytown Elementary	87	16.35	16.09	5.93	0.22	0.38	0.89	0.76	3.69	57.47	79.0	52	29	38.5	9	
Wilburn Elementary	138	18.07	7.97	6.73	0.43	0.39	1.09	0.90	3.91	27.54	93.0	53	45	9.0	53	
Holly Springs Elem. *	155	18.44	0.65	6.18	0.47	0.39	1.41	0.76	3.15	30.97	77.0	54	34	42.0	47	
Lacy Elementary	89	18.54	3.37	7.40	0.70	0.55	1.46	0.69	4.01	28.09	92.0	55	54	11.0	51	
Underwood Elementary	40	18.69	0.00	5.08	0.53	0.50	0.88	0.53	2.65	40.00	66.0	56	13	55.5	38	
Washington Elementary	89	18.99	0.00	6.45	0.44	0.25	1.18	1.48	3.10	53.93	92.0	57	40	11.0	13	
Hunter Elementary	108	19.65	0.00	5.14	0.24	0.35	0.74	0.82	3.19	33.33	96.0	58	15	3.5	45	
Carver Elementary	83	19.91	4.82	9.06	0.89	0.53	1.89	1.17	4.58	44.58	79.5	59	65	35.5	29	
Smith Elementary	108	20.18	7.41	9.85	0.77	0.72	1.84	1.06	5.46	14.81	46.0	60	68	68.0	64	
Rolesville Elementary	131	20.38	6.11	7.04	0.40	0.22	1.50	0.96	3.95	22.90	66.0	61	47	55.5	56	
Rand Road Elementary	101	20.88	2.97	10.60	0.89	1.06	2.72	1.07	4.94	16.83	46.0	62	69	68.0	62	
Creech Road Elementary	102	22.40	1.96	8.59	0.73	0.66	2.23	0.84	4.14	35.29	74.5	63	60	47.0	42	
Vandora Springs Elem.	75	24.16	1.33	7.13	0.71	0.44	1.17	1.23	3.59	50.67	59.0	64	49	60.5	19	
Hodge Road Elementary	119	25.50	10.92	6.24	0.46	0.21	1.24	1.07	3.25	47.90	82.0	65	35	31.5	23	
Conn Elementary	71	25.55	0.00	6.06	0.38	0.31	1.08	0.77	3.51	12.68	66.0	66	32	55.5	66	
Zebulon Elementary	103	26.24	0.00	6.64	0.42	0.25	1.39	1.08	3.5C	28.16	79.0	67	43	38.5	50	
Lockhart Elementary	97	27.96	9.28	6.06	0.67	0.41	0.82	0.81	3.34	16.49	83.0	68	33	28.5	63	
Wendell Elementary	62	39.74	0.00	6.71	0.84	0.26	1.29	1.05	3.27	14.52	57.0	69	44	63.5	65	
NCPS	7423	12.12	5.16	6.29	0.45	0.39	1.28	0.81	3.37	39.80	80.0	na	na	na	na	

Number of items: 41 Total; 5 Personal; 5 Social; 20 Lang/Lit; 8 Physical; 3 Math  
High rank indicates more needs

\* These schools have more than 31 kindergarten students served by special education

19

20

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